

REMARKS

Claims 1, 60-73 and 79-91 and 97-101 are pending in the application. Claims 2-59, 74-78 and 92-96 have been canceled. Claims 1, 73 and 99-101 have been amended.

Prior Claim Rejections

The withdrawal of the prior claim rejections based on the arguments and amendments presented in the prior response is gratefully acknowledged.

Claim Objections

The claims have been corrected as required. The error is regretted and the Examiner is thanked for her attention in noting it.

New Claim Rejections under §103

Claims 1, 60, 61, 63-66, 73, 79, 80, 82-85, 97 and 98 were rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 5,478,527 to Gustafson et al. ("Gustafson") in view of US Patent No. 5,478,527 to Chenchik et al. ("Chenchik"). Claims 62 and 81 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gustafson and Chenchik and further in view of US Patent No. 6,329,209 to Wagner et al. ("Wagner"). Claims 67-72 and 86-91 were again rejected under 35 U.S.C. §103(a) as being unpatentable over Gustafson and Chenchik and further in view of US Patent No. 5,482,867 to Barrett et al. ("Barrett").

The pending claims are directed to particular arrays of protein-binding agents stably attached to the surface of a solid support, and kits incorporating such arrays. The arrays and kits are used for conducting proteomic analyses such as differential binding assays in which the binding of a particular protein, that has been labeled with a fluorescent dye, to an array element is detected by a fluorescence-based detection system (see, e.g., page 28, line 3 to page 30, line 13 and page 33, line 32 to page 34, line 7). The arrays are designed to optimize the effectiveness of this fluorescence-based detection system.

The claims have previously been focused on a particular embodiment of the invention in hopes of expediting prosecution. These claims recite an embodiment of the invention wherein an aluminum on glass substrate surface is coated with a particular configuration of silicon dioxide on the aluminum substrate surface that can amplify the fluorescent signal used to read the arrays with resultant improvement in performance of the arrays in practice. In particular, a suitable configuration is a thickness of between about 200 and 900Å, and a preferred fluorescent signal generating dye set, the amine reactive dyes Cy3 and Cy5. Claims 1 and 73 have been amended to recite that the solid substrate has a substantially planar surface comprising a layer of

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aluminum formed on a glass base material, the aluminum coated with a silicon dioxide coating having a thickness of between about 200 and 900Å, and dependent claims 97-98 and 99-101 and, depending from claims 1 and 73 respectively, have been amended or added to recite the presence of fluorescent dye reagents or labeled proteins, and the nature and identity of the preferred fluorescent dyes. Claim 99, in particular, is submitted to provide an independent basis for patentability given the lack of any suggestion or teaching of an array defined by claim one with bound, labeled proteins.

Claims 1 and 73 have now been further amended to explicitly recite that the claimed arrays do not define a diffraction grating from which a diffracted light signal indicating the presence of a protein bound to one or more of the protein binding agents is obtained, in order to explicitly distinguish the diffraction biograting array described in Gustafson. As has been explained in prior responses, the arrays of the present invention are fluorescence-based assay arrays and form part of the fluorescence based kits described and claimed herein, and are used in conjunction with the methods and systems described in the specification. The array substrates are not diffraction gratings or "biogratings" as described and claimed in Gustafson and do not function in the manner described therein. As a result, it is respectfully submitted that one of ordinary skill in the art would not be motivated to combine the teachings of Gustafson with other teachings to arrive at the presently claimed invention. And moreover, the present invention is not obtained by the combination of the cited art. The arrays of the present invention do not emit a diffracted light signal when illuminated by a light source. They are instead configured to amplify a fluorescent signal used to read the arrays.

For at least these reasons, it is respectfully submitted that claim 1, and corresponding kit claim 73, of the present application are novel and patentable over the cited references. The remaining pending claims depend, directly or indirectly, from claim 1 or 73 and are thus submitted to be patentable for at least the same reasons.

Conclusion

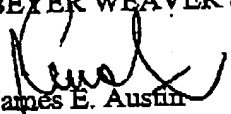
If the Examiner remains unconvinced of the patentability of the present claims in view of the foregoing arguments and remarks, Applicants respectfully request an opportunity to provide a Declaration under 37 CFR 132 in support of the assertions made herein with regard to the distinctions between the arrays of the cited Gustafson reference and the presently claimed invention before the issuance of a Final Office Action.

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at (510) 663-1100. If any additional fees are due in connection with the filing of this

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amendment, the Commissioner is authorized to charge such fees to Deposit Account 500388
(Order No. CHIRP014).

Respectfully submitted,
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